

1. In a fuel dispensing system for fueling a vehicle equipped with an ORVR system wherein the fuel dispensing system includes an assist-type vapor recovery system adapted to process vapors expelled from a fuel tank on the vehicle when the fuel tank is filling with fuel dispensed from a spout of a nozzle inserted into a filler tube of the vehicle leading to the fuel tank and the nozzle being coupled to a hose of the fuel dispensing system, the nozzle including an automatic shut-off mechanism for ceasing the flow of fuel through the nozzle when the fuel tank is approaching a filled condition, the shut-off mechanism including a diaphragm separating a first chamber from a second chamber, the improvement comprising:
  - a first passage in communication with the first chamber and the assist-type vapor recovery system of the fuel dispensing system; and
  - a second passage in communication with the second chamber and the ORVR system of the vehicle;
- wherein when the vehicle is being filled with fuel from the fuel dispensing system a first air pressure generated by the assist-type vapor recovery system is communicated to the first chamber and a second air pressure generated by the ORVR system is communicated to the second chamber such that the diaphragm of the shut-off mechanism is not substantially deflected by the combination of the first and second air pressures until such time as the shut-off mechanism senses the fuel tank approaching the filled condition.

2. The fuel dispensing system of claim 1 wherein the first and second passages are in substantially sealed communication with the first and second chambers, respectively.
3. The fuel dispensing system of claim 2 further comprising:
  - a boot surrounding the spout and adapted to be in substantially sealed contact with the filler tube as part of the second passage.
4. The fuel dispensing system of claim 2 further comprising:
  - a vent tube mounted within the spout of the nozzle and coupled to a vent in the spout as part of the first passage.

5. A fueling arrangement comprising:

a storage tank for storing fuel;

a hose for transferring the fuel from the storage tank;

a pump operably coupled to the hose for pumping the fuel

5 through the hose;

a nozzle connected to the hose for dispensing the fuel through a  
filler tube and into a fuel tank of a vehicle;

wherein the vehicle includes an ORVR system for processing  
vapors displaced from the fuel tank;

10 a vapor recovery system for processing vapors displaced from the  
fuel tank, the vapor recovery system including a pump for pumping the  
vapors from the fuel tank and through the nozzle and hose to the  
storage tank;

a shut-off mechanism coupled to the nozzle for ceasing the flow  
15 of fuel through the nozzle and into the filler tube when the fuel tank is  
approaching a filled condition, the shut-off mechanism including a  
diaphragm separating a first chamber from a second chamber;

a first passage in communication with the first chamber and the  
vapor recovery system; and

20 a second passage in communication with the second chamber  
and the ORVR system of the vehicle;

wherein when the vehicle is being filled with fuel from the fuel  
dispensing system a first air pressure generated by the vapor recovery  
system is communicated to the first chamber and a second air pressure

25 generated by the ORVR system is communicated to the second chamber such that the diaphragm of the shut-off mechanism is not substantially deflected by the combination of the first and second air pressures until such time as the shut-off mechanism senses the fuel tank approaching the filled condition.

6. The fueling arrangement of claim 5 wherein the first and second passages are in substantially sealed communication with the first and second chambers, respectively.

7. The fueling arrangement of claim 6 further comprising:  
a boot surrounding the spout and adapted to be in substantially sealed contact with the filler tube as part of the second passage.

8. The fueling arrangement of claim 6 further comprising:  
a vent tube mounted within the spout of the nozzle and coupled to a vent in the spout as part of the first passage.